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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,782	06/26/2003	Etsuo Oogami	040302-0327	4066
22428 7590 08/02/2007 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER HODGE, ROBERT W	
			ART UNIT 1745	PAPER NUMBER
			MAIL DATE 08/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/603,782	Applicant(s) OOGAMI, ETSUO	
	Examiner Robert Hodge	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-13 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks, filed 4/23/07, with respect to the rejections under 35 U.S.C. 112 first and second paragraphs have been fully considered and are persuasive. The rejections under 35 U.S.C. 112 first and second paragraphs have been withdrawn.

The Examiner acknowledges that claims 14-17 and 19-21 have been canceled and therefore any rejection of said claims is now moot.

With respect to applicants traversal of the Examiners interpretation of the limitation of "a motor vehicle", claim 12 only recites "A motor vehicle comprising a module battery according to claim 13". The only addition structure that is added by claim 12 is a motor and a vehicle containing that motor, there is no recitation as to scale. It is submitted that toy cars are a vehicle and contain an electric motor that is driven by multi cell batteries and therefore the structure is present to read on the recitation of claim 12. Claim 12 has been given the broadest most reasonable interpretation of the recitations contained therein and said interpretation has been clarified to applicants. It is not the Examiners job to make sure applicants agree with the interpretation, it is however the job of the Examiner to clarify how the claims can and are interpreted.

The remainder of applicants' arguments focuses on the combination of Hanafusa and Osaka in rejecting claim 13. Applicants state that neither reference teaches "a pair of electrode tabs connecting the power generating element and protruding from the film"

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or "an opening for each of the electrode tabs to extend from the packing case and connect to each other, wherein each of the openings is arranged linearly". As was clarified in the advisory action dated 5/10/07 and reiterated herein: It is clear from figures 1b, 13, 27b, and 30 that Hanafusa does in fact teach a pair of electrode tabs connected to the power generating element and protruding from the film. If the tabs did not protrude through the film then there would be no way of connecting the cell to a device that can use the electrical power. Furthermore it is quite clear that each electrode tab has an individual opening from which it protrudes and that the openings are arranged linearly along the sealed edge of the packing case which houses the battery cell.

The Examiner notes that the amendment to claim 18 is not entirely proper. Applicants are reminded that an amendment deleting a word or words should either be enclosed with double brackets or crossed through, see 37 CFR 1.121 and MPEP 714.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 3, 4, 6, 9-11, 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1160895 hereinafter Hanafusa in view of JP 2001-256934 hereinafter Osaka.

Hanafusa teaches a lithium ion module battery comprising a battery pack comprising at least one battery cell having a power generating element sealed in a film

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and a pair of electrode tabs connected to the power generating element and a packing case that provides an opening for the electrode tabs, said case is comprised of case halves that sandwich the battery cell. Hanafusa also teaches a space upstream wider than the other region of space due to the shape of the battery pack being thick in the middle and narrow on the ends (i.e. claim 18 of the instant application having a taper affect from the center to the ends). Hanafusa further teaches that the module battery can be properly scaled for use in portable telephones and notebook PCs (abstract, paragraphs [0002]-[0007], [0014]-[0022], [0029]-[0044], [0050]-[0055], and [0061]-[0084]).

Hanafusa does not teach the use of a packing case containing a plurality of the battery modules or any specifics of how the plurality of cells are packed therein.

Osaka teaches a packing case for accommodating a plurality of stacked battery packs that covers all of the openings of the packing cases, with space provided between the battery packs and a flange provided to align the packing cases that also provides the space between the battery packs (abstract).

At the time of the invention it would have been obvious to one having ordinary skill in the art to include a plurality of battery packs in Hanafusa as taught by Osaka in order to provide a module battery that is properly sized for the power output requirements of its intended use.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanafusa in view of Osaka as applied to claim 13 above, and further in view of JP-2001-114157 hereinafter Takahashi.

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Hanafusa as modified by Osaka does not teach that the openings of the packing cases are covered so as to make the stacked battery packs air tight.

Takahashi teaches a battery assembly that provides a waterproof structure for the battery box, which would also be air tight (abstract).

At the time of the invention it would have been obvious to a person having ordinary skill in the art to make the battery packs of Hanafusa as modified by Osaka air tight as taught by Takahashi in order to prevent any contaminants from entering the battery cells that could effect the electrochemical reaction which would in turn reduce the life of the battery.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanafusa in view of Osaka as applied to claim 3 above, and further in view of U.S. 6,821,671 hereinafter Hinton.

Hanafusa as modified by Osaka does not teach a cooling fin in the space.

Hinton teaches a battery pack for cooling battery cells that includes a cooling fin provided in hollow spaces (figure 4, column 4, lines 30-38).

At the time of the invention it would have been obvious to include a cooling fins in the battery pack of Hanafusa as modified by Osaka as taught by Hinton in order to provide additional cooling means for maintaining the battery cells as their optimal operating temperature, thereby extending the life of the battery.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanafusa in view of Osaka as applied to claim 6 above, and further in view of U.S. 5,688,615 hereinafter Mrotek.

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Hanafusa as modified by Osaka does not teach a locate pin for aligning the battery cell.

Mrotek teaches a battery cell provided within a housing that utilizes an alignment pin, to line up the battery cell within the housing (figure 6, column 5, line 66 – column 6, line 37).

At the time of the invention it would have been obvious to include an alignment pin in Hanafusa as modified by Osaka as taught by Mrotek in order to provide a simplified means of assembling the battery cell within the housing thereby making sure everything is perfectly aligned before completing the assembly process.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanafusa in view of Osaka as applied to claim 6 above, and further in view of U.S. 6,517,966 hereinafter Marukawa.

Hanafusa as modified by Osaka does not teach that the halves of the case are symmetrical.

Marukawa teaches a battery pack case that is symmetrical with protrusion used for lining up the symmetrical halves (column 2, line 55 – column 3, line 3).

At the time of the invention it would have been obvious to include symmetrical case halves in Hanafusa as taught by Marukawa in order to provide a simplified means of assembling the housing thereby making sure everything is perfectly aligned before completing the assembly process.

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Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanafusa in view of Osaka as applied to claim 13 above, and further in view of U.S. 5,879,831 hereinafter Ovshinsky.

Hanafusa as modified by Osaka does not teach a motor vehicle comprising a module battery.

Ovshinsky teaches a battery pack that includes a plurality of packing cases provided therein that are spaced a part from each other to allow fluid to flow there through (abstract, column 3, line 24 – column 5, line 47, column 7, lines 36-60, column 9, line 21 – column 10, line 51, column 12, lines 1-3, column 13, line 46 – column 19, line 25). Ovshinsky also teaches that it is well known for batteries to power motor vehicles (column 1, lines 21-25).

At the time of the invention it would have been obvious to a person having ordinary skill in the art to provide the module battery of Hanafusa as modified by Osaka in a motor vehicle as taught by Ovshinsky and properly scale the battery for its intended use in the vehicle, whichever use that may be, such as replacing an internal combustion engine or supplementing the engine as well, in order to provide a vehicle that has reduced pollution production or none at all either by completely replacing the internal combustion engine or by supplementing it.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RWH


JONATHAN CREPEAU
PRIMARY EXAMINER